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CENTRAL FAX CENTERApplication No.: 10/501598  
Docket No.: AD6856USPCT

DEC 13 2006

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REMARKS

Reconsideration is respectfully requested in view of the amendments and remarks herein.

In paragraph 4, Claims 1, 2, 10-12, 14-16, 18, 20, 21, 23-41, 46-58, and 61-68 stand rejected under 35 USC 103(a) as obvious over Gutweiler (US 5,573,842) in view of Dauvergne (FR 2,401,941 Abstract), and Shohi (EP 1036775), further in view of Degeilh (US 4,696,971).

In paragraph 5, Claim 22 stand rejected under 35 USC 103(a) as obvious over Gutweiler (US 5,573,842) in view of Dauvergne (FR 2,401,941 Abstract), in view of Shohi (EP 1036775), in view of Degeilh (US 4,696,971), and further in view of an online product brochure from Great Lakes Chemical Corporation.

In paragraph 6, Claims 59-60 stand rejected under 35 USC 103(a) as obvious over Gutweiler (US 5,573,842) in view of Dauvergne (FR 2,401,941 Abstract), in view of Shohi (EP 1036775), in view of Degeilh (US 4,696,971), and further in view of Keppler (US 4,433,108).

Applicants discuss the rejection with respect to the process claims, as the product claims are now cancelled.

The Action provides a detailed discussion of the claims and the cited documents, and at page 14 directly responds to the arguments provided by Applicants in their previous response. Rather than present a detailed response to each point in the lengthily Office Action, applicants focus herein to the comments at page 14 of the Action.

At page 14, the Action states that applicants arguments are not persuasive. That is, Applicants previously argued that Degeilh teach away from the claimed invention because the claims are directed to a process involving the step of raising the pH of the mixture to at least pH 10, whereas Degeilh teaches a process involving a step of neutralizing to a pH of no more than 5. The Action states that this argument is not persuasive because Degeilh only teaches away from the claimed pH, i.e., only teaches a preference of a pH of no more than 5, when the product is used in applications where the ability to adhere to glass is critical. That Action states that "Since applicants' claims are not related to any glass adherence application, it would not be considered a teach away reference for one of ordinary skill in the art not working on polymers products that are in the glass related applications."

Applicants submit that Degeilh does teach away from the claimed invention since the claims are directed to making PVB useful for making glass laminates that used in windshields for vehicles such as automobiles, architectural applications, etc. Concerning this point, applicants direct the Examiner's attention to the Abstract and to the paragraph beginning on page 1, line 9. In addition, applicants are providing herewith a number of pages from the DuPont website that describe the science and history of laminated safety glass (<http://www.dupont.com/safetyglass/en/science/index.html>).

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<http://www.dupont.com/safetyglass/en/science/history/index.html> and <http://www.dupont.com/safetyglass/en/science/technology/index.html>, and the brochure entitled "DuPont™ Laminated Glass Interlayers").

Further, while applicants believe that amending the claims in order to respond to this rejection is unnecessary, in order to expedite prosecution applicants have amended the claims to recite the processes produce products that are "suitable for use in the manufacture of glass laminates." Applicants submit that this phrase supports patentability over the cited documents since Degeilh expressly teaches away from using DOSS in a process involving stabilizing a mixture of the type obtained in step (I) by (a) raising the pH of the mixture to at least pH 10, (b) isolating the resin by draining the liquid, and (c) washing the resin with neutral pH water. Concerning this point, please see (for example) the paragraph at column 2, lines 15-24. Moreover, Degeilh states that the Degeilh invention is an improvement over the Dauvergne (FR 2,401,941) process. That is, Degeilh teaches that the process should be carried out with DOSS and neutralizing to pH of no more than 5, not using dodecylbenzene sulphonate in combination with a higher pH as in Dauvergne. Therefore, Degeilh leads away from the claimed invention and cannot be combined with the other documents as in the rejection.

Consequently, applicants submit that for this reason alone the rejection is improper and should be withdrawn.

#### Amendments to the Claims

Applicants submit that entry of the amendments herein after final Action is appropriate since the amendments respond to points raised by the Examiner in the final Action. Applicants submit that the amendments place the application in condition for allowance or better position for appeal.

The process claims are amended to recite that the processes produce products that are "suitable for use in the manufacture of glass laminates." Support is in the Abstract and the paragraph beginning on page 1, line 9.

The product claims are cancelled.

Entry and consideration are respectfully requested.

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In view of the foregoing, allowance of the above-referenced application is respectfully requested. Should any matters remain, the Examiner is invited to telephone the undersigned at the below-listed direct dial telephone number in order to expedite prosecution.

Respectfully submitted,



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Dated: December 12, 2006

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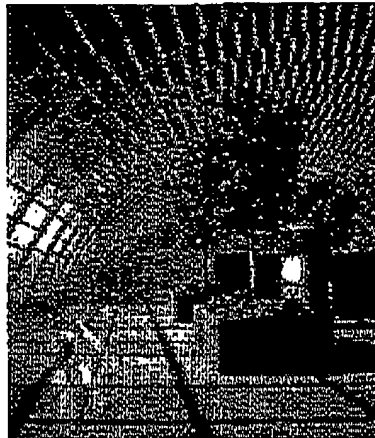
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## The Science of Laminated Safety Glass



When tough, adhesive plastic interlayers are laminated between glass, the plastic helps hold things together even if the glass breaks. This helps prevent injuries related to flying glass or exposed shards. In cars, laminated safety glass also helps reduce accident-related head trauma and occupant ejection. In buildings it helps deter break-ins, prevent storm damage, improve energy efficiency, and even protect people from

bombs and blasts.

The strength and other properties of laminated glass can be tailored to meet specific needs. Softer interlayers can help reduce noise. Stiffer interlayers can help glass perform more like a structural composite material. Laminated glass also enables aesthetic and energy-saving features to accompany basic safety performance. For more on the science of laminated glass, explore:

The History of Laminated Glass.

Laminating Technology used today.

DuPont Interlayer Manufacturing facilities.

You can also experiment with a laminated glass Strength of Glass Calculator Tool, to help orient yourself to design loads, support conditions, and model-generated stress limits for chosen thicknesses and types of glass and interlayer.

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## Laminated Glass History

### Created to save lives

Today's laminated safety glass was born from research conducted in the 1930s by a consortium of companies, including DuPont, asked to find a clear, tough, adhesive material that could be manufactured efficiently into automobile windshields. As car ownership and speeds increased, too many windshields were being shattered by rocks kicked up from dirt roads, creating a flying glass hazard for drivers and passengers.

A solution was found in a tough, clear, flexible plastic sheet made of polyvinyl butyral (PVB), which could be sandwiched in between glass to create a safety windshield. DuPont™ Butacite® brand PVB was introduced, with excellent adhesion to glass, long-term weather durability and permanent transparency. Automobile manufacturers were quick to accept PVB sheet as a safety standard, and the glass laminating industry was born.

### Decades of rapid growth and innovation

The use of laminated glass quickly spread to buildings, where broken glass can be a hazard as well. Unlike ordinary or tempered glass, which falls apart when fractured, laminated glass stays in place. It helps keep the building envelope intact, reduces the danger of glass shards, and helps prevent people from falling through sudden openings.

Users of laminated glass soon discovered that it also helped reduce noise, block harmful UV rays, cut energy bills and protect against break-ins. In cars and in buildings, use of laminated glass continues to grow, increasing safety worldwide.

## Laminated Glass

### Laminated Glass News



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## Glass Laminating Technology

DuPont Glass Laminating Solutions focuses on clear, super-tough polymer (plastic) sheet materials (called "interlayers") that can be sandwiched between glass and formed into a composite by controlled processes combining heat and high pressure. The processing typically is done in large autoclaves capable of making finished, laminated glass suitable for vehicles or buildings.

Laminated glass improves safety because of its post-breakage performance. Even when an outer glass layer is broken, such as from a sharp blow, the interlayer in the laminate helps hold the broken glass together, reducing injuries from jagged edges or flying shards.

Interlayer materials available from DuPont include:

- rolled goods;
- flat, pre-cut sheets; and
- digitally printed, pre-cut sheets

These materials are supplied in a variety of thicknesses, and in color tint specialties where required. Glass laminators and window and door manufacturers use the interlayers from DuPont to complete the construction of glass meeting end-use requirements.

DuPont polymer science has created the glass industry's largest range of high-performance interlayer types.

## Laminated Glass

### Laminated Glass



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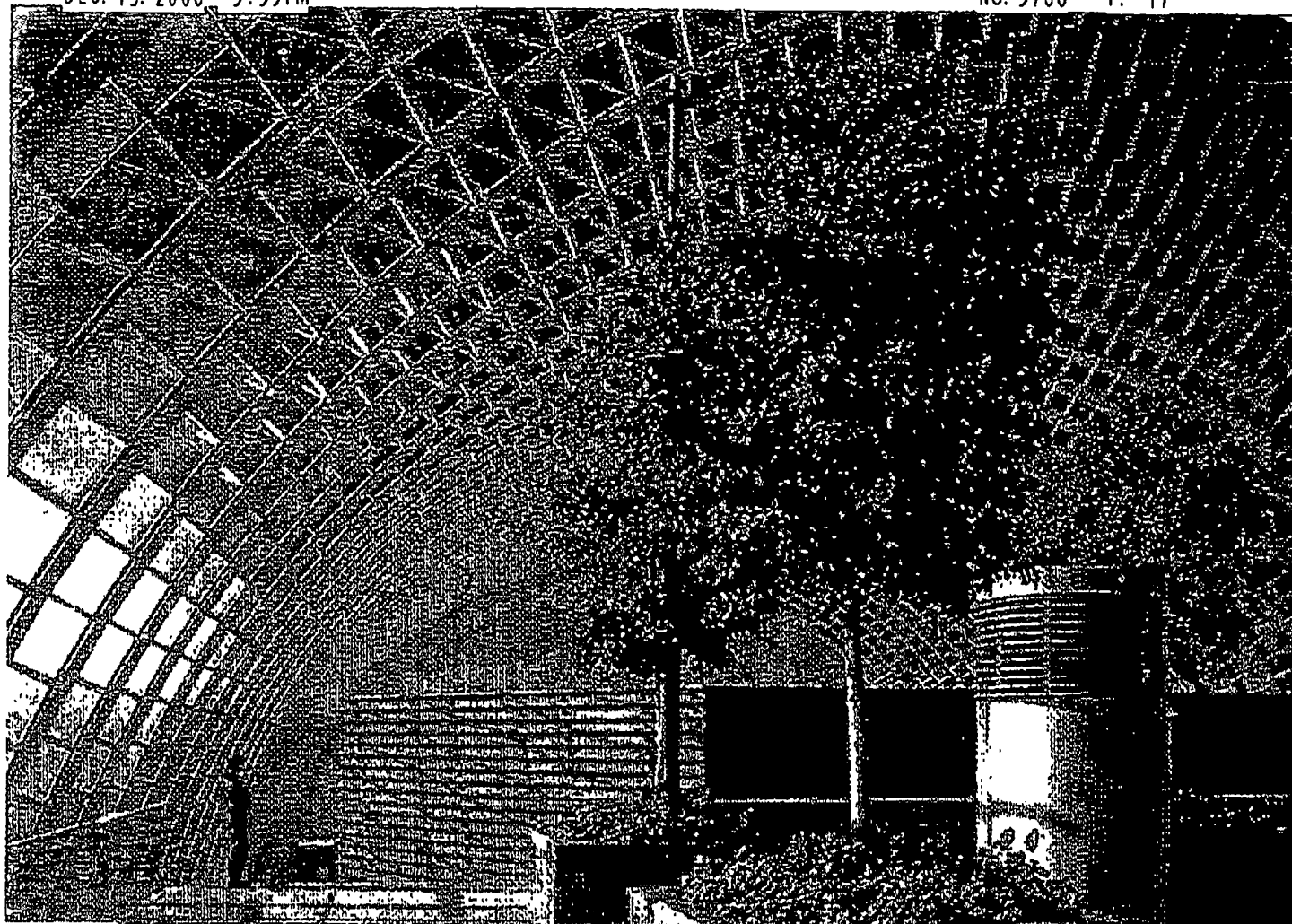
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## DuPont™ Laminated Glass Interlayers

- Butacite® polyvinyl butyral (PVB) interlayer
- SentryGlas® Expressions™ decorative interlayer
- SentryGlas® Plus structural interlayer



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## DuPont™ Laminated Glass Interlayers

DuPont™ laminated glass interlayers enable laminated architectural glass to far exceed the performance of standard glass. The DuPont family of products includes Butacite® polyvinyl butyral (PVB) interlayers, SentryGlas® Plus structural interlayers, and SentryGlas® Expressions™ decorative interlayers.

### Butacite® Polyvinyl Butyral (PVB)

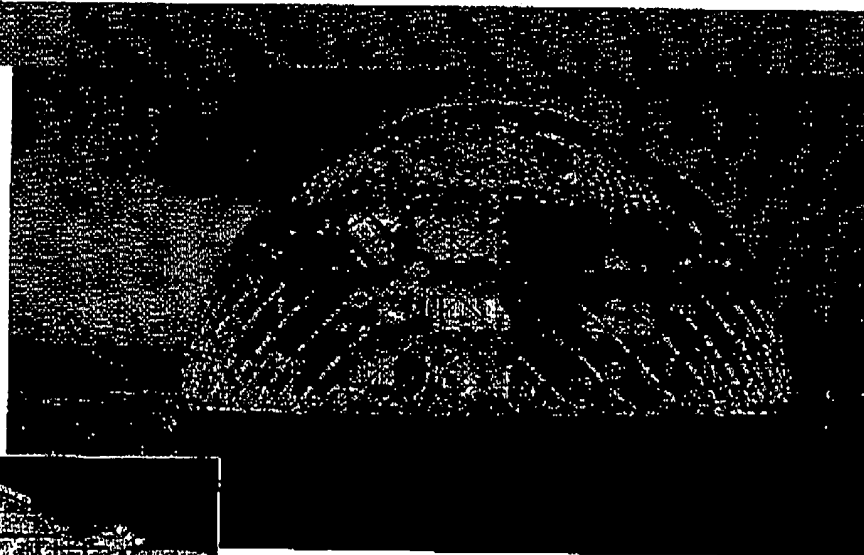
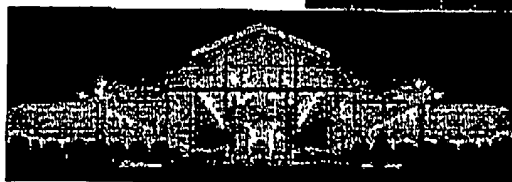
Butacite® PVB allows glass in windows and doors to break safely with glass fragments staying adhered to the interlayer. It minimizes injuries from flying glass after a bomb blast, as well as provides intrusion resistance from burglars who attempt to enter homes through windows and doors.

Butacite® PVB provides hurricane protection that is incorporated into windows and glass doors, enabling them to meet the stringent hurricane building codes established in southeastern Florida, as well as code requirements in the International Residential Code and the International Building Code covering the coast from Texas to New England.

Butacite® PVB is an excellent barrier to reduce the noise from traffic, lawnmowers, boats, barking dogs and low flying airplanes. It also screens out the damaging effects of harmful UV rays.

### Ten Reasons to Use DuPont™ Laminated Glass Interlayers

- Safety
- Security
- Sound Reduction
- Solar Energy Control
- UV Control
- Weather/Natural Disasters
- Durability
- Design Versatility
- Installation Ease
- Low Visible Distortion





### SentryGlas® Expressions™ Decorative Interlayers

DuPont™ SentryGlas® Expressions™ is a new decorative glass technology that can produce virtually any design or image your client wishes to put in glass. Similar to other DuPont interlayer technologies, SentryGlas® Expressions™ is an interlayer that glass laminators use to produce laminated safety glass. The process involves 1) Submitting print ready digital files to DuPont by the architect, 2) Printing proprietary inks on special interlayers by DuPont, 3) Shipping the printed interlayers to a qualified laminator who produces the final glass assembly. From concept to production, you can quickly add colors, textures, logos, text and photographs to almost any environment to enhance the overall project.



People can experience unique environments in decorative safety glass thanks to DuPont™ SentryGlas® Expressions™ decorative interlayers.



Photographic image quality and a rich color palette are demonstrated in a feature healthcare wall using DuPont™ SentryGlas® Expressions™ decorative interlayers.

#### Typical Features

**Backings:** You can print images on clear or two different types of white backings. One can specify the addition of translucent white (65% White) or soft white (80% White) as a white backing layer.

**Color Proofing:** If a specific color is required you can submit to DuPont a color swatch or reference a common color identification system like PANTONE®.

**Sizes:** Max size is 94" x 168" (2388 mm x 4267 mm). Lengths greater than 168" may be possible on a special order basis.

**Print Requirements:** DuPont prefers the client to provide print ready digital files. For high quality images, please provide scalable vector files or raster image files at 150–200 pixels per inch (60–80 pixels per cm) at final production size. It is better to provide as high a resolution file as possible with minimal compression. Acceptable formats include .tiff, .eps, .ai,

and .psd formatted in PC- or Macintosh-based Photoshop®, Illustrator® or most other common graphic design programs. If the client can not obtain print ready files, contact DuPont for further assistance.

**Weathering:** SentryGlas® Expressions™ has excellent lightfastness and is being used in many permanent interior and exterior applications. This combination of glass, ink and interlayer helps provide extra durability by protecting prints against moisture, pollutants and damaging ultraviolet rays.

#### Generic Specification

Laminated glass with SentryGlas® Expressions™ decorative interlayer with (clear, translucent white, or soft white) backing. Print ready images will be supplied by the project's (architect, client, or graphic designer).

Any questions related to SentryGlas® Expressions™ technology can be addressed to: [expressions@dupont.com](mailto:expressions@dupont.com)

### SentryGlas® Plus Structural Interlayers

Originally created for specialty markets such as high-security glazing and hurricane windows, SentryGlas® Plus interlayers are used in exposed edge applications, including structural glazing, bolted and frameless glass facades, flooring and stair treads, and balustrades. This interlayer offers:

#### Strength

SentryGlas® Plus Interlayer is 100 times stiffer and 5 times stronger than traditional interlayers, helping thinner laminates meet specified wind loads or structural requirements. In stairs, flooring and overhead glazing, SentryGlas® Plus acts like an engineered composite, with low mechanical strain under loads, and outstanding post-breakage resistance to creep and collapse.

#### Edge stability

SentryGlas® Plus laminates offer excellent edge stability performance and are less susceptible to moisture intrusion or other weathering effects. In testing with widely used silicone sealants, butt-joined panels of laminated glass made with SentryGlas® Plus interlayers show excellent compatibility, remaining free of many common edge defects after years of weather exposure and inspection.

#### Outstanding clarity

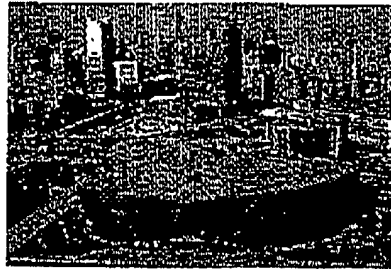
SentryGlas® Plus starts out with a significantly lower yellowness index (YI) compared to traditional interlayers and keeps its clarity after years of service. When used in combination with low-iron glass, laminates offer an ultra clear appearance that enhances daylighting and views.

**Thicknesses:** 80, 90, and 100 mil **Color:** Clear only

**Maximum Sizes:** 100 in (2540 mm) (width) 186 in (4724 mm) (length)



SentryGlas® Plus Installation: Stair Rail



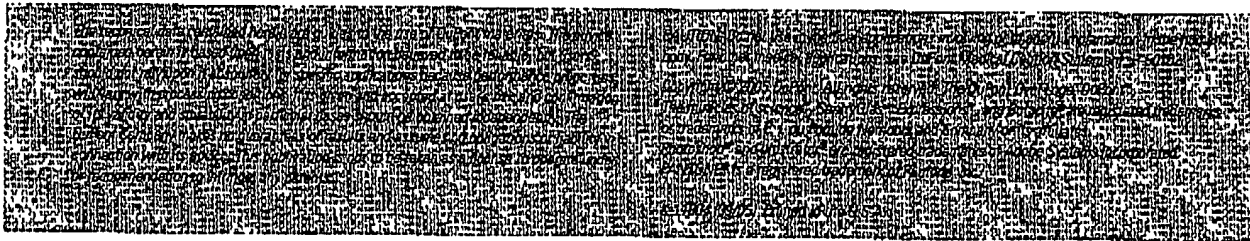
SentryGlas® Plus Installation: Shanghai Oriental Arts Center



SentryGlas® Plus Installation: Florida Hospital Waterman

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